

**IN THE DRAWINGS:**

Please amend the drawings as enclosed herein.

**REMARKS**

Claims 1-19 are rejected. Claims 1 and 11 are independent claims. Claims 1-19 are pending in the application.

Reconsideration of all grounds of rejection in the Office Action, and allowance of all of the pending claims are respectfully requested in light of the following remarks.

Specification and drawings have been amended to remove typos and correct sentence structure. No new matters have been added.

Claim 14 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response, claim 14 has been amended to recite “reflective layer” instead of “reflector”.

Accordingly, withdraw of the above objection is respectfully requested.

Claims 1, 9, 11 and 14 stand rejected under 35 U.S.C §102(b) as allegedly anticipated by Seki (U.S.4,790,615), hereafter “Seki.” Applicants respectfully traverse the rejection of claim 1 and 11 over Seki as follows.

Claim 1, inter alia, recites “a reflector having a reflective groove formed by a photolithography process...”

The present invention provides a reflector with a reflective groove extending from one end surface **217a** of the module to a connection waveguide **243a** or **243b** so as to precisely control the location of a reflective surface of a reflector (See FIG. 3 through 6). **“Since the reflective groove 249 is obtained using the photolithography process, it is possible to assure a precise location of the reflector 204 in the module, more**

**specifically the location of the base surface 217b.** With the conventional dicing and polishing procedures, it was difficult to control the location of the reflector in the range of  $\pm 10 \mu m$  from a designed value. However, with the photolithography process, it is possible to control the location of the reflector 204 up to the range of  $\pm 0.2 \mu m$  from the designed value (Page 7, lines 21 to 23, Page 8, lines 1 to 10 ) (emphasis added).

In contrast, Seki's module in its first embodiment teaches two elongated "filter-fitting grooves 30 . . . [30A and 30B] . . . formed to extend along the entire width of the substrate 10 to be perpendicular to the sides 11 and 12 of the substrate 10" (Columns 3, lines 56 to 58 and See FIG 2. In its second embodiment, Seki's module discloses a single groove 30 runs parallel to the sides 11 and 12 of the substrate 10 (Column 4, line 54 to 55) see FIG. 4. Finally, in its third embodiment, Seki's module shows three grooves; 70, 71 and 72 which are configured similar to the first embodiment (Column 7, line 1 to 4 and see FIG. 5).

Accordingly, Seki et al. fails to disclose a reflector comprising a reflective groove having a small, narrow and more precise location, as recited in base claims.

Moreover, applicant respectfully submit that the teachings of Seki et al. relates to the problem that the present invention seeks to improve upon; that is, a reflection groove which is large, wide and having an indistinct location. Furthermore, the present invention relates to a bi-directional optical communication module having a multiplexer. However, Seki et al. relates to a component corresponding to the multiplexer of the optical communication module of the present invention.

Therefore, it is respectfully submitted that claim 1 and 11 are not anticipated by Seki, and reconsideration and withdrawal of this ground for rejection are respectfully requested.

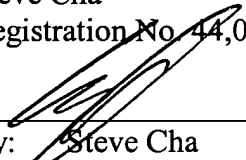
The other claims in this application are each dependent from the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

For all the foregoing reasons, it is respectfully submitted that all of the present claims are patentable in view of the cited reference. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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Registration No. 44,069

Date: July 25, 2005

  
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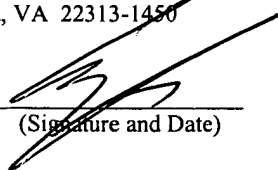
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Steve Cha, Reg. No. 44,069  
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*Annotated sketch-up*

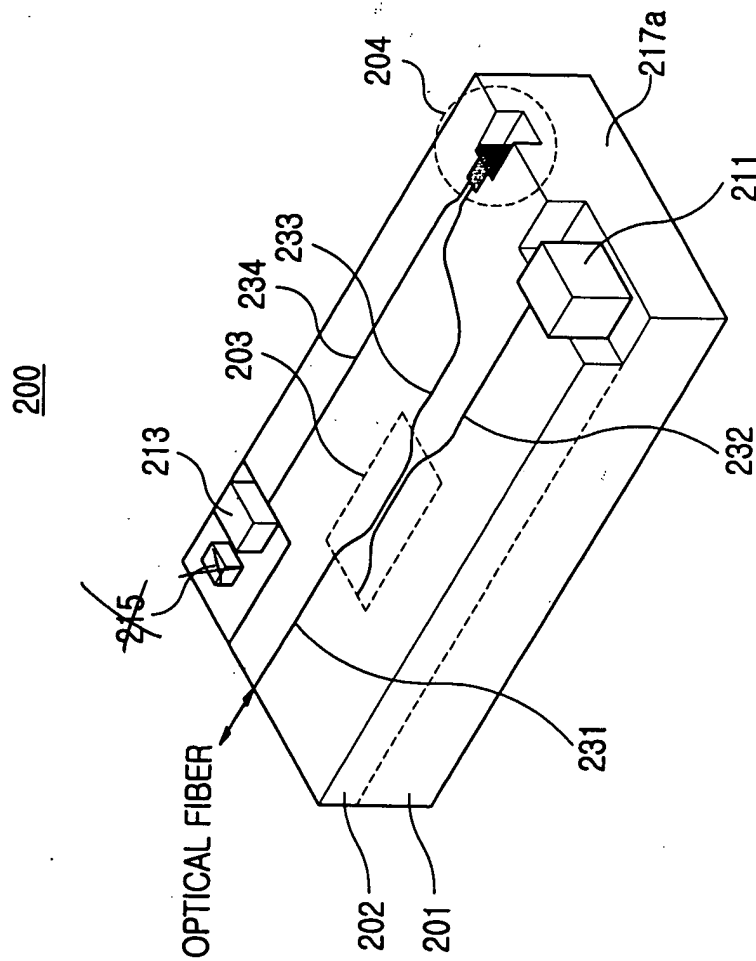


FIG. 3